

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L14	87	L3 same L13	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/11 14:50
L15	2	("5164992").PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/11 14:23
L12	3	L3 same L10	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/11 12:42
L13	78924	((lightness brightness luminance (gr\$1y adj1 (level scale)) colo\$1r contrast) near4 (adjust\$3 enhanc\$5))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/11 12:41
L10	1301	automatic\$2 with ((lightness brightness luminance (gr\$1y adj1 (level scale)) colo\$1r contrast) near4 (adjust\$3 enhanc\$5))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/11 12:41
L11	1	l4 same l10	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/11 12:40
L9	1201	(L7 L8) and @pd>="20040301"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/11 11:36
L8	3244	358/518-523;348/169.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/11 11:36
L7	1901	382/103, "115,118", 162,167-169, 254-275.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/11 11:36

L6	5	((("6445819") or ("6571003")).PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/11 11:35
L5	96	3 same 4	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/11 10:46
L4	3936	(face facial) near3 enhanc\$5	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/11 09:35
L3	75028	((detect\$3 locat\$3) near3 (face facial))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/11 09:35
L2	1003	(detect\$3 locat\$3) with (face facial) with enhanc\$5	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/11 09:34
L1	531	(face with locat\$3 with enhanc\$5)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/11 09:33
S29	15	S28 and @ad<"20010515"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/07 11:58
S28	60	(automatic\$4 with (red\$1eye near3 (detect\$3 determin\$5)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/07 11:57
S27	70	(automatic\$4 with red\$1eye with detect\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/07 11:57
S6	44	(red\$1eye with detect\$3) and (red\$1eye with (eliminat\$3 remov\$3))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/07 11:56



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Key

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- IEEE JNL IEEE Journal or Magazine
- IEEE JNL IEEE Journal or Magazine
- IEEE CNF IEEE Conference Proceeding
- IEEE CNF IEEE Conference Proceeding
- IEEE STD IEEE Standard

Select Article Information

- ☐ 1. Content-based selective enhancement for streaming video  
van der Schaar, M.; Lin, Y.-T.;  
Image Processing, 2001. Proceedings. 2001 International Conference on  
Volume 2, 7-10 Oct. 2001 Page(s):977 - 980 vol.2  
Digital Object Identifier 10.1109/ICIP.2001.958659  
[AbstractPlus](#) | Full Text: [PDF](#)(496 KB) IEEE CNF

- ☐ 2. Face detection using multi-modal information

Sang-Hoon Kim; Hyoung-Gon Kim;  
Automatic Face and Gesture Recognition, 2000. Proceedings. Fourth IEEE International  
Conference on  
28-30 March 2000 Page(s):14 - 19  
Digital Object Identifier 10.1109/AFGR.2000.840606  
[AbstractPlus](#) | Full Text: [PDF](#)(236 KB) IEEE CNF

- ☐ 3. Low-complexity face-assisted video coding

Chia-Wen Lin; Yao-Jen Chang; Yung-Chang Chen;  
Image Processing, 2000. Proceedings. 2000 International Conference on  
Volume 2, 10-13 Sept. 2000 Page(s):207 - 210 vol.2  
Digital Object Identifier 10.1109/ICIP.2000.899270  
[AbstractPlus](#) | Full Text: [PDF](#)(488 KB) IEEE CNF

- ☐ 4.

JGram: rapid development of multi-agent pipelines for real-world tasks  
Sukthankar, R.; Brusseau, A.; Pelletier, R.; Stockton, R.;  
Agent Systems and Applications, 1999 and Third International Symposium on Mobile Agents.  
Proceedings. First International Symposium on

3-6 Oct. 1999 Page(s):30 - 40  
Digital Object Identifier 10.1109/ASAMA.1999.805391  
[AbstractPlus](#) | Full Text: [PDF](#)(100 KB) [IEEE CNF](#)

- ☐
- 5. An image processing and belief network approach to face detection**  
De Souza Coelho, P.S.; Esperanca, C.; De Oliveira, A.A.F.;  
Computer Graphics and Image Processing, 1999. Proceedings. XII Brazilian Symposium on  
17-20 Oct. 1999 Page(s):177 - 186  
Digital Object Identifier 10.1109/SIBGRA.1999.805723  
[AbstractPlus](#) | Full Text: [PDF](#)(204 KB) [IEEE CNF](#)

- ☐
- 6. Object oriented face detection using range and color information**  
Sang-Hoon Kim; Nam-Kyu Kim; Sang Chul Ahn; Hyoung-Gon Kim;  
Automatic Face and Gesture Recognition, 1998. Proceedings. Third IEEE International  
Conference on  
14-16 April 1998 Page(s):76 - 81  
Digital Object Identifier 10.1109/AFGR.1998.670928  
[AbstractPlus](#) | Full Text: [PDF](#)(456 KB) [IEEE CNF](#)

- ☐
- 7. Constructing a fuzzy grammar for syntactic face detection**  
Kouzani, A.Z.; He, F.; Sammut, K.;  
Systems, Man, and Cybernetics, 1996., IEEE International Conference on  
Volume 2, 14-17 Oct. 1996 Page(s):1156 - 1161 vol.2  
Digital Object Identifier 10.1109/ICSMC.1996.571249  
[AbstractPlus](#) | Full Text: [PDF](#)(988 KB) [IEEE CNF](#)


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### 3 Technical poster session 1: multimedia analysis, processing, and retrieval: Facial expression representation and recognition based on texture augmentation and topographic masking

Lijun Yin, Johnny Loi, Wei Xiong

October 2004 **Proceedings of the 12th annual ACM international conference on Multimedia**

Full text available:  [pdf\(392.98 KB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)


The variation of facial texture and surface due to the change of expression is an important cue for analyzing and modeling facial expressions. In this paper, we propose a new approach to represent the facial expression by using a so-called topographic feature. In order to capture the variation of facial surface structure, facial textures are processed by increasing the resolution. The topographical structure of human face is analyzed based on the resolution-enhanced textures. We investigate t ...

**Keywords:** facial expression, feature labeling, super resolution

### 4 Video and multimedia digital libraries: A multilingual, multimodal digital video library system

Michael R. Lyu, Edward Yau, Sam Sze

July 2002 **Proceedings of the 2nd ACM/IEEE-CS joint conference on Digital libraries**

Full text available:  [pdf\(440.24 KB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)


This paper presents the iVIEW system, a multi-lingual, multi-modal digital video content management system for intelligent searching and access of English and Chinese video contents. iVIEW allows full content indexing, searching and retrieval of multi-lingual text, audio and video material. It consists image processing techniques for scenes and scene changes analyses, speech processing techniques for audio signal transcriptions, and multi-lingual natural language processing techniques for word r ...

**Keywords:** applications, browser on mobile devices, middleware and browser interactions, multi-modal interactions, multimedia management and support

### 5 Progress in Picture Processing: 1969--71

Azriel Rosenfeld

June 1973 **ACM Computing Surveys (CSUR)**, Volume 5 Issue 2


Full text available:  [pdf\(2.34 MB\)](#)

Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

### 6 Image II: A multimodal approach to time-invariant scene retrieval from single overhead image

Jian Yao, Zhongfei (Mark) Zhang, Lijun Yin

October 2004 **Proceedings of the 6th ACM SIGMM international workshop on Multimedia information retrieval**

Full text available:  [pdf\(586.79 KB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)


We investigate a practical problem of time-invariant scene retrieval from single airport overhead image. A multimodal

approach is developed to solving for the problem, in which an efficient method using image modality data is developed for time-specific object detection, and a method using graphics modality data is developed for removal of the detected objects. Theoretical analyses and experimental evaluations show the efficiency and the effectiveness of the approach.

**Keywords:** aircraft detection, aircraft removal, texture synthesis

## 7 Demo experience: Who's that actor?: the InfoSip TV agent

Nevenka Dimitrova, Angel Janevski, Dongge Li, John Zimmerman  
November 2003 **Proceedings of the 2003 ACM SIGMM workshop on Experiential telepresence**

Full text available:  pdf(215.61 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)


We present a content augmentation application that enhances the primary video watching experience by providing related supplemental information. Our goal is to explore the value of cross-referencing related content among different media such as TV and Web. The cross-referencing is based on metadata, which is automatically extracted from the content. Metadata extraction can make a great difference for personalized user experience. In addition, annotations that provide title, genre, description, a ...

**Keywords:** Interactive TV services, content augmentation, content enhancement, hypervideo, person identification, talking head analysis

## 8 Distributed termination detection in a mobile wireless network

Jeff Matocha


April 1998 **Proceedings of the 36th annual Southeast regional conference**

Full text available:  pdf(801.32 KB) Additional Information: [full citation](#), [references](#), [index terms](#)

## 9 Mathematical Models for Automatic Line Detection

Arnold K. Griffith

January 1973 **Journal of the ACM (JACM)**, Volume 20 Issue 1

Full text available:  pdf(1.24 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

A particular decision-theoretic approach to the problem of detecting straight edges and lines in pictures is discussed. A model is proposed of the appearance of scenes consisting of prismatic solids, taking into account blurring, noise, and smooth variations in intensity over faces. A suboptimal statistical decision procedure is developed for the identification of a line within a narrow band in the field of view, given an array of intensity values from within the band. The performance of th ...

## 10 Applications: a dimension space for user interface management systems

Joëlle Coutaz, Sandrine Balbo